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## Figure 1A

$$F \xrightarrow{\lambda_{1}} CI \xrightarrow{\lambda_{1}} B_{I} \xrightarrow{\lambda_{1}} CI \xrightarrow{\lambda_{1}} CI$$

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## Figure 1B

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## Figure 2A

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## Figure 2B

# Figure 2C

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# Figure 2D

$$F_{3}C = CI \\ \sum_{i,N-N} CF_{3} \\ \sum_{i,N-N} CF_{4} \\ \sum_{i,N-N} CF_{4}$$

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## Figure 2E

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# Figure 2F

### Figure 3

## Figure 4A

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## Figure 4B

Br 
$$H_3C$$
  $CH_3$   $H_3C$   $H_3C$ 

# Figure 4C

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# FIGURE 5A

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### FIGURE 5B

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#### FIGURE 5C

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## FIGURE 5D

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## FIGURE 5E

#### FIGURE 5F

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# FIGURE 5G

$$F = \begin{cases} CF_3 \\ CH_3 \\ CH_3 \end{cases}$$

$$F = \begin{cases} CI \\ CH_3 \\ CH_3 \end{cases}$$

$$F = \begin{cases} CI \\ CH_3 \\ CH_3 \end{cases}$$

$$F = \begin{cases} CI \\ CH_3 \\ CH_3 \end{cases}$$

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## FIGURE 5H

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# FIGURE 5J

#### FIGURE 5K

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## FIGURE 5L

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## FIGURE 5M

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## FIGURE 5N